



Approaches and methods used for measuring organizational performance in national sport governing bodies from 1986 to 2014. A systematized review

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COMMENTARY

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ABSTRACT

In order to secure continued funding national sport governing bodies (NSGBs) are challenged to demonstrate their performance. However, what should those organizations show to for instance governmental authorities and/or how should those authorities evaluate these organizations regarding their performance? Theoretical considerations not only show that NSGBs are to be understood as natural and open systems with different levels to be considered, but also reveal limitations in existing models of organizational performance (OP) according to the context of NSGBs.

By means of a systematic literature research identified empirical investigations measuring OP in NSGBs are analyzed. 20 empirical studies could be identified, with the strategic constituencies approach being the model most often applied. However, further analysis showed an insufficient application of ratings of OP by external constituencies. Not only the expectations of or working relations with affiliated clubs or regional federations, but the individuals' perceptions and motives as well seem to be taken into account to a very limited extent. Giving greater consideration to the micro level is not only required in the attempt to detect potential biases in the individual assessment of OP, but also due to the necessity of considering NSGBs as open and natural systems and agents' discretionary room for manoeuvre. Multi-level modelling seems to be promising, not only in providing more reliable results, but also in enhancing our understanding of OP, and thus also how to manage it. To avoid confusion authors should clearly determine whether they treat a variable as indicator or determinant (=predictor) of OP. Another fundamental requirement for the development of models is the explicit consideration of outcomes, and especially of impacts/public value accomplishment. With applying OP measurement (systems) in NSGBs the critical question arises if such managerial actions might be more introduced in terms of their symbolic importance rather than their operational values.

Keywords:

Organizational performance – organizational effectiveness – national sport governing bodies – systematic review

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Introduction

On one hand, sports and its (non-profit) organizations have been attributed with numerous positive functions they can have in modern societies. On the other hand, there seems to have emerged a widespread concern for the abilities for those organizations to actually fulfill these visions/hopes (Seippel, 2010). In addition to this question of the legitimacy of receiving support from public (and private) funds, organizations in the non-profit sector are increasingly confronted with financial and competitive pressure, leading to a rising emphasis on performance measurement. This seems to result in a situation where non-profit (sport) organizations are (progressively) challenged to (actively) demonstrate their performance in order to secure continued funding (Lee & Nowell, 2015).

However, what should those organizations on the one hand show to for instance governmental authorities, and, on the other hand, how should those authorities evaluate these organizations regarding their performance? Either way, with organizational performance (OP) not being a manifest variable but a latent construct the resulting question is how OP should be conceptualized for non-profit sport organizations. Since there exists a great variety of non-profit sport organizations and, as will be shown later, the way of conceptualizing OP should take the characteristics of the organization as well as its “products” into account, a restriction to a type of sport organization actually being confronted with the question of OP measurement seems not only to be appropriate, but also necessary.¹ *Therefore, this paper is going to deal with the question of the appropriateness/fit of models and methodologies applied in empirical investigations for measuring OP in non-profit national sport governing bodies (NSGBs).*

To get an appropriate understanding in terms of the organizational theoretical perspective we should underlay that we first have to characterize the mentioned organization/unit of analysis and one of its main “products” from a theoretical perspective. Secondly, “main” models used for measuring OP in private non-profit organizations (NPOs) are going to be described and analyzed with regard to their relevance as well as their limitations according to the context of NPOs and NSGBs respectively. This will end up in the deduction of an analytical framework for the data collection process of finally in this study included empirical investigations measuring OP in NSGBs. To the best of our knowledge there only exists one review (O’Boyle & Hassan, 2014) dealing with the question of OP in NSGBs. However, this review deals mainly with the indicators respectively determinants² of OP and its management and does neither review in detail the models used nor discuss the fit of the methodological approaches applied for measuring OP in NSGBs. With the works of Eydi (2015), Eydi, Ramezanineghad, Yousefi, Sajjadi, and Malekakhlagh (2011), and Winand, Vos, Claessens, Thibaut,

and Scheerder (2014), there exist three other reviews dealing with the performance of non-profit sport organizations. Although these reviews (i.a.) describe and analysis the models being applied in empirical studies it has to be said that these works review investigations dealing with different types of non-profit sport organizations (NSGBs, intercollegiate athletics, sports clubs, etc.). Furthermore the literature search of these reviews were not done in a systematic manner.

Therefore, this review seems to be a valuable contribution in terms of questioning the appropriateness/fit of models and methodologies applied in empirical investigations for measuring OP in NSGBs. Especially the characterization and organizational theoretical conceptualisation of NSGBs and one of their main “products” will not only enable to deduce further limitations of the models applied, but as well help to identify fundamental requirements for the further development of approaches for measuring OP in NSGBs.

Theoretical conceptualisation of NSGBs and of its central “products”

If performance measurement has to be oriented towards the characteristics of an organization, or respectively has to take these into account, we now need to examine the issue briefly, in order to derive fundamental characteristics of NSGBs. These organizations can be characterized based on the following five considerations: (1) the fact that the federation belongs to the *third sector*, (2) the federation as a *private NPO*, (3) the federation as a *voluntary organization*, (4) *dependence on national* (e.g., public authorities) and *international* (international sport federations) *constituencies*, and (5) *existence of simultaneous contradictions* (for one or several, but never for all of these arguments see e.g., Bayle & Madella, 2002; Shilbury & Moore, 2006; Velsen-Zerweck, 1998; Winand, Zintz, Bayle, & Robinson, 2010).³ With the extension of the Hegelian business model of the dichotomy of market and state, a *third sector*, also called non-profit sector, independent sector, non-governmental sector or private voluntary sector, was introduced (Schulze, 2002). This comprises all non-governmental organizations that do not serve the purpose of making a profit (Schütte, 2016). These are typically organizations in which people associate with each other to determine their relationships regardless of monetary or external regulatory influence (Schuppert, 1989). However, it should be noted that the institutional structure of sports systems in a large majority of European countries takes the form of a bottom-up system, but the “production” of sporting success, one of the main functions of NSGBs, nevertheless follows the idea of a hierarchical (top-down) structure. This means that NSGBs find themselves in a situation where, although being formally at the head of a production process, they are not

¹ For further justification see below.

² For distinction and the problem of confusion of indicators and determinants within this context see below.

³ Schulze (2002) mentions another concept (“Verbandskonzept”) used to characterize a federation. This is rarely found in the pertinent literature and will therefore not be discussed in detail.

equipped with the requisite legitimate powers (Barth, 2015; Emrich & Flatau, n.y.; Emrich & Güllich, 2005). Consequently, we can assume that those involved have considerable discretionary power and room for manoeuvre, and that there is a need for legitimization of action taken by the NSGBs (as agents) vis à vis their members/principals. Being assessed by members of the sports system as justified among other things by the collective good character of sporting success, the need for legitimization by NSGBs exists not only with respect to their members (clubs), but also to organizations in the public sector, and in the end to society. Although the assignment of NSGBs to the third sector seems to be basically acceptable the mentioned specifics due to the institutional environmental characteristics have to be considered.

The NSGBs seem to be more clearly assigned to the *NPO* group, whose central characteristic is the prohibition of the distribution of profits (Emrich, 1996; Schütte, 2016). Especially as most of the federations in sports (including those in Germany and Austria) were founded initially as voluntary associations, realizing of profits is already forbidden by law.⁴ However, characterizing NSGBs using the criteria for a NPO does not appear to suffice. Because even if a (restricted) perception of NPOs commonly found in international research, excluding public administration offices and governmental organizations, is employed, NPOs belonging to public self-governing bodies (e.g., chamber, social security agency) remain included (Greiling, 2009). For this reason, federations have to be more exactly termed *private NPOs* (for a further discussion of basic types of NPOs and the problem of distinguishing them from for-profit organizations cf. Emrich, 1996).

If we follow the concept of private NPO without compulsory membership, largely derived from that defined by Salamon and Anheier (1992, p. 268), and that used in the agenda-setting "Johns Hopkins Project", organizations strongly demonstrate the following criteria: they have (1) a formal constitution, they are (2) non-governmental in their basic structure and thus separated from the state in their endeavour, (3) they are self-governing, (4) they are not-profit distributing, and (5) "voluntary to some meaningful extent". Even though it does not coincide exactly, this concept is very similar to the idea derived from sociology of seeing sports associations as *voluntary associations*. According to Heinemann and Horch (1981), these are characterized by the following features: (1) voluntary membership, (2) independence from the state (autonomy), (3) orientation towards the interests of the members, (4) democratic decision structures, and (5) voluntary work. The monopolistic representative powers of the NSGBs for their respective type of sport(s) at national level derived from regulation, together with the receipt of subsidies partly subject to conditions, represent considerable limitations for the aforementioned characteristic features (for a more detailed discussion cf. Emrich, 2014; Emrich, Pitsch, & Papathanassiou, 2001).

In a first interim summary, it firstly becomes apparent that the three⁵ considerations for characterizing the unit of analysis discussed reveal (substantive) overlaps, due to the overlapping of their fundamental concepts. Secondly, associations and federations are often treated as synonymous, or respectively the characteristics considered are not sufficient to depict the specific characteristics of federations in contrast to those of associations (Emrich, 2009).⁶ Regarding our research question an important difference between sport associations and federations seems to arise when looking more closely at their dependence on the environment. Although sports organizations in the sense of associations are to be characterized as relatively weakly coupled to their environment (Emrich et al., 2001; Flatau, Pitsch, & Emrich, 2012; Gassmann, Emrich, & Pierdzioch, 2017; Thiel & Meier, 2004), it seems to be reasonable to assume that for NSGBs sports the relationships to their environment are of high importance. Looking more closely at the stakeholders reveal, that these are organizations at *national* and *international level* as well (see Bayle & Madella's, 2002 description of stakeholders' expectations with respect to a NSGB). Thirdly, the institutional structure of sports systems leads to a lack of rights of intervention, and thus in turn to considerable discretionary powers and room for manoeuvre in the scope of the "production" of sporting success, whose organizational structure is hierarchical in concept. These result in the need for legitimization towards the lower levels, and the need to consider motivational problems (see fundamentally Daumann, 2015).

Several authors emphasize *the existence of simultaneous contradictions* in NSGBs. Such tensions exist because of double (private and public) funding of NSGBs, the simultaneous support of elite athletes and the promoting of mass sport participation, the collaboration of professional staff and volunteers, and contradictions between non-profit and commercial cultures (Shilbury & Moore, 2006; Winand et al., 2010). Emrich (1996) speaks analyzing the Olympic Training Centres in Germany of an anomic system.

Due to the high dependence of NSGBs to their environment an appropriate measurement of OP in NSGBs must not only consider the organizational level, but has to take different (environment-) levels into account. Such a multi-level approach was used by Nagel, Schlesinger, Bayle, and Giauque (2015) when analyzing professionalization in sport federations. They distinguished between three levels: external environment (e.g., government and sport policy), sport federation (e.g., the size of the organization), and internal environment (e.g., regional federations). Hence a measurement approach for OP in NSGBs should be multidimensional in the sense of considering different dimensions of performance, but has also to include the evalua-

4 Austria: cf. § 1 Abs. 2, 66. Bundesgesetz über Vereine (Vereinsgesetz 2002 - VerG), BGBl I Nr. 66/2002; Germany: Breuer et al. (2006).

5 This would also be true when considering the above mentioned "Verbandskonzept".

6 Velsen-Zerweck (1998) demonstrates one possible approach taking into account, along with constitutional and consecutive characteristics, facultative characteristics, which describe federations in the narrowest sense. These are dual management, federalism, and subsidiarity.

tion of different constituencies (multiple constituencies) (Willems, Boenigk, & Jegers, 2014; for target conflicts see Emrich, 1996). By the reason of a possible appearance of divergence of interests between the NSGBs and its member organizations, but also between organizations and their individual members in conjunction with discretionary powers and room for manoeuvre, we have to be aware of potential measurement bias in the individual assessment of OP. This means, that the above mentioned multi-level framework has to be extended to include an individual level.

Based on the actor-theoretical concept sport federations can be conceptualized as corporate actors (i.a., Nagel, 2007) and therefore characterized as interest communities of their members or member organizations combining their resources with the aim of realizing shared interests (Emrich, 2009; Nagel et al., 2015). Against this background and the ideas of Coleman (1986) and Esser (1999), Nagel (2007) developed a multi-level framework for analyzing the development of sports clubs, which incorporates three levels – macro level, meso level, and micro level – with the latter being the individual member's level (for an example of multi-level analysis see Emrich, Fröhlich, Klein, & Pitsch, 2009). Therefore, the measurement of OP should not only be a multidimensional and multiple constituency approach, but also consider the interests of the individual respondent. To control for potential biases group measurement instead of individual measurement should be used (for a comparison of individual and group measurement for measuring OP in NPOs see Willems et al., 2014).

The reception of subsidies, partly justified by the "production" of a public good (sporting success), leads to a need for legitimization regarding the "sponsors" and in the end to society. For this reason, an examination of the output in the most literal sense would not seem to suffice. Methods of measurement of the OP in NSGBs should consider the variables of the outcomes and impacts as well.⁷ The emphasis of the legitimization function (as opposed to the seemingly frequently over-emphasized production function) arises not only as a result of the institutional structure of sports systems and the position of the NSGBs within those systems, but also of theoretical considerations with regard to the perception of "organization". The reason for the choice of theory here derives from the structure of the systems, the type of organizations under examination (private NPO) and the consideration of one of their central "products" (sporting success).⁸ According to the theoretical approach of Meyer and Rowan (1977) we can assume that in the institutional contexts in which NSGBs are embedded, there are notions and expectations as to how effectively and efficiently operating organizations should be designed. These notions and expectations are rationalized in the sense that they identify desirable goals and purposes from the perspective of the respective stakeholder groups, together with suitable purposes

to achieve these (Barth, 2015; Walgenbach & Meyer, 2008; for strong and weak forms of decoupling of talk and action see Emrich et al., 2001). Here it concerns manifestations of institutionalized rules, which perform their function in the form of highly rationalized myths. The latter are considered legitimate even without any evaluation on their effectiveness (Meyer & Rowan, 1977). This has two main consequences: firstly, these expectations can be of very different natures, which means the (successful) organization is required to counterbalance them.⁹ Here we have to pay particular attention to approaches which take the inherently paradox nature of organizations into account. This also applies to models that take the different perspectives of the exchange partners into account.¹⁰ Secondly, the question arises as to whether OP measurement (and management) systems might not themselves become tools for legitimization. Issues concerning limits, hazards and problems, for example such as the potential "transition to independence" of systems like these, have to be dealt with. The unit of analysis has therefore overall from organizational theoretical perspective not (or not so much) to be seen as a rational closed system for the purpose of fulfilling the targets set by the organization, but (far more) as a natural and open system, in which the focus is on the survival of the system.^{11,12} Furthermore, with above discussed differences between associations and federations it seems reasonable to restrict the literature being reviewed to sport federations (on national level).

Models for measuring OP – their relevance and limitations according to the context of NSGBs

Depending on the notion of what an organization is, the perspective of what characterizes a "successful" organization also seems to change. In this respect, it is not surprising that there are many models for evaluating performance of private NPOs. However, it has to be noted that not only is there an inconsistency in the question of what OP is, but also with regard to the separation of the term OP from that of organizational effective-

7 On differentiation, see (among others) Lee and Nowell (2015).

8 Promoting mass sport participation could be further added as central "product" of NSGB.

9 Meyer and Rowan (1977, p. 355) point out in this context that contradictions can arise not only due to differing environmental requirement, but also especially because of possible differences between technical requirements ("technical activities and demands for efficiency") and the efforts of organizations to comply with the ceremonial (rationalized) rules from their environments. For different theoretical approaches to sports organizations see Emrich (2009).

10 For a presentation of the many internal and external stakeholders, see Daumann and Römmelt (2013).

11 On the fundamental description of the notion of organization as a rational, natural or open system, see Scott (1986).

12 The notion of an organization in the criticism presented above according to Meyer and Rowan (1977) represents that of an open natural system, for example. The term natural is contrasted especially with rational – goals are vague and contradictory, participants have their own interests and motives (see fundamentally Scott, 1986).

ness (for the effectiveness of Olympic Training Centres see Emrich, 1996). While e.g., Bayle and Madella (2002), Madella, Bayle, and Tome (2005), Nowy, Wicker, Feiler, and Breuer (2015), Winand et al. (2010), or Winand et al. (2014) see OP as the broader term, i.a., Henri (2004) understands the terms as being synonymous, and other authors also interpret organizational effectiveness as the broader term compared with OP (among others Richard, Devinney, Yip, & Johnson, 2009; Tayşir & Tayşir, 2012; Willems et al., 2014; for the difference between efficiency and effectiveness see Emrich & Güllich, 2005). Likewise, difficulties arise in separating the terms effectiveness and efficiency, and as well in the context of evaluating the relationship of

terms such as quality management or organizational capacity to OP. However, it seems more important here to define the requirements of the methodological approach in the scope of literary research, than to try (unsuccessfully) to define these terms. This has to be approached in a wider sense, so that it not only covers the term OP, but also organizational effectiveness, and even quality management (for the link between cost accounting and quality management in Olympic Training Centres see Emrich & Wadsack, 2005). In the scope of this study, the term OP should (continue to) be used, whereas it has to be understood as being twice as comprehensive. Firstly, it has at least to cover the term organizational effectiveness, and sec-

Table 1: Characteristics and limitations of main theoretical models of OP

Model	Definition	Usefulness of approach	Limitations according to the context of NPOs, respectively of NSGBs
	An organization is effective to the extent that ...	The model is preferred when ...	
Goal attainment approach	It accomplishes its stated goals.	Goals are clear, measurable and time constrained.	Goals are often intangible, changing, and unrealistic. Notion of an organization as a rational system, the accompanying strong emphasis of the production function, and the limited importance attached to the relationships to the (general social, cultural and technical) environment as well as to the legitimization function seem to be challenging.
Systems resource approach	It acquires the resources needed.	A clear connection exists between inputs and outputs.	Some resources come from the trusteeship and are annually renewable. Clear connection between inputs and performance seems in front of empirical results in the context of the effectiveness of sport development programs to be problematic.
Internal process approach	It creates no internal strains, with smooth internal functioning.	A clear connection exists between organizational process and the primary goal.	This connection is in general not as clear as for private organizations. Serious doubts have to be cast on claims of correct (empirically proven) causal links between internal processes (in this case limited to the program) and output, due to existing empirical findings with regard to central deductions for the construction principles of long-term training, and promotion concepts used in the scope of "production" of sporting success.
Strategic constituencies approach	All strategic constituencies have a minimum degree of satisfaction.	Constituencies have powerful influence on the organization (as in terms of little organizational slack) and it has to respond to demands.	Hard to operationalize in terms of feasibility and time due to huge amount of constituencies. Weak validity.
CVA	The evaluation of the organization in four areas matches constituent preferences.	The organization has no clear view of its own priorities, or shows a quick change in the criteria over time.	Difficulty of realization. Does not assess in detail the ability to achieve goals.

Source: Adapted from Winand et al. (2010, p. 282) who themselves adapted it from Bayle and Madella (2002, p. 4) who were inspired by Cameron (1986, p. 542).

Note: For derivation of limitations the following sources were additionally used: (1) goal attainment approach: Cameron (1980), Scott (1986), Shilbury and Moore (2006), Slack and Parent (2006); (2) systems resource approach: Barth (2015), Cameron (1980), Cameron and Whetten (1996), Emrich and Güllich (2005), Slack and Parent (2006), Yuchtman and Seashore (1967); (3) internal process approach: Barth (2015), Cameron (1980), Emrich and Güllich (2005), Slack and Parent (2006); (4) strategic constituencies approach: Bunting (1995), Cameron and Whetten (1996); (5); CVA: Cameron and Whetten (1996), Campbell (1977), Quinn and Rohrbaugh (1981, 1983).

ondly, it has to take the multiple meanings of the term performance into account. This term can refer to the result of an action, or the action itself, but also to the success (in the sense of the evaluated performance) (Bourguignon, 1995 according to Madella et al., 2005; for typical target conflicts in elite schools of sport see Emrich et al., 2009). This is connected with the fact that the term can relate to "input", in the sense of sufficient resources, "throughput", in the sense of the efficient transformation of the resources, and "output", understood as achieving relevant and planned goals (effectiveness in the stricter sense). Three of the traditional models most commonly used in relevant literature for measuring OP are applied to the three phases of the value chain: (1) the systems resource approach, (2) the internal process approach, and (3) the goal attainment approach. Literature also describes two other models as main models: the (4) strategic constituencies approach and (5) the competing values approach (CVA) (Slack & Parent, 2006; Winand et al., 2014).

A description of the five models shows Table 1. Furthermore, their relevance as well as their limitations according to the context of NPOs, respectively of NSGBs are described.

A closer look at the models listed above reveals that the unit of analysis is for all five models the organizational level. However, considering our remarks to view a NSGB from organizational theoretical perspective not (or not so much) as a rational closed system for the purpose of fulfilling the targets set by the organization, but (far more) as a natural and open system, in which the focus is on the survival of the system, means that the unit of analysis being restricted to the organizational level seems to be doubtful. Even the CVA model, intended to suit especially the inherent paradoxical nature of organizations (Cameron & Whetten, 1996) seems to be problematic in this context. It is questionable whether this approach actually succeeds in considering the notion of the organization as a natural and open system (according to the understanding by Scott, 1986) sufficiently. A particularly critical point is the fact that criteria which are not at organizational level were excluded from the model design, i.e., criteria such as staff satisfaction from the internal process approach are no longer considered.

Furthermore not considering the micro level seems to be especially problematic if, among other things, biased answers, the decoupling of "talk and action"¹³ or even motivational problems are to be expected – problems which, as shown above, seem to be very likely in organizations like the unit of analysis of this study, due to the existing discretionary powers and room for manoeuvre. In conclusion not considering the micro level when measuring OP seems to be problematic in two respects: First, such an approach seems not be suitable for measuring OP in organizations to be characterized as natural and open systems, like NSGBs. Second, problems in the context of

measuring variables at organizational level by (single) raters¹⁴ are not sufficiently taken into account.

With the characterization of NSGBs, it became clear what distinguishes organizations, and thereby what has respectively to be considered when measuring their performance. In the scope of the examination of main models used for measuring OP in NPOs, it became clear that apparently a number of problem areas emerge within measuring OP in NPOs respectively in NSGBs. For this reason, the aim of this study is a systematic literature research based analysis of theoretical and methodical approaches used for measuring OP in NSGBs with special attention to the question of appropriateness/fit of models and methodologies applied used due to the special characteristics of NSGBs.

On behalf of the above considerations and the study carried out by Willems et al. (2014) a derivation of an analytical framework for the data collection process of finally in this study included empirical investigations was done. This will be presented in the next method section.

Methods

Eligibility criteria

The systematic literary research is oriented towards the guidelines according to Moher, Liberati, Tetzlaff, Altman, and The PRISMA Group (2009).¹⁵ The *eligibility criteria* employed are:

Table 2: Eligibility criteria

Study characteristics	Empirical studies, no further restriction concerning methods used
Time period:	No restriction
Period of literary research:	November 2015 until February 2016
Languages:	English, German
Publication status:	Full-length articles, peer-reviewed

¹⁴ For reasons of differences in the assessment of OP by raters' opinions see Willems et al. (2014).

¹⁵ Due to the fact that central characteristics of a systematic review are missing (e.g., only one reviewer was involved, no quality assessment of studies is included this review) this study clearly does not fulfill the requirements of a systematic review (for requirements see e.g., Grant & Booth, 2009; Moher et al., 2009). Therefore, we decided to describe our study as systematized review (for differentiation see Grant & Booth, 2009). Due to the fact that the aim of this study is gathered around the question of methodological limitations of existing studies, this approach seems to be appropriate. We really appreciate the advice of one of the article's reviewer in this context.

¹³ For the decoupling of decision, talk and action in organizations see Brunsson (2002). Cf. for sports organizations Emrich (2009) and Emrich et al. (2001).

Due to the small number of studies dealing with this subject, no further criteria of exclusion are used. Although this means that no further criteria to assess the quality of the contributions are applied, this seems to be justified/reasonable, given the background and the decision only to include articles being published in peer-reviewed journals. The reason for the limitation to articles being published in peer-reviewed journals is the danger – which seems to be inherent in measurement procedures of evaluation of this kind – of an (unconscious) linking of a valuable rationality with an instrumental rationality as described by Weber (2009). Accordingly, the exclusion of an insufficiently factually based connection between the selected indicators and the problem, and thus an insufficient theoretical connection, seems to be of great importance. Furthermore, only empirical original studies are considered in the scope of analysis.

Information sources and search strategy

The following databases and search engines are employed for the search: SPOLIT, EBSCOhost, JSTOR, ScienceDirect, Springerlink, Emerald Insight, Web of Science, SAGE journals, Taylor & Francis Online and WISO. Due to the lack of consistency in terminology used in the literature, the search phrases are of a comprehensive nature.¹⁶

In addition to this, the relevant journals¹⁷ are scanned, with the research being limited to issues published after the beginning of 2014. The date last searched was February 20th, 2016.

Study selection and data collection process

The number of articles passing this first line of elimination can be seen in the flowchart in Figure 1, entitled “Number of Records Identified by means of Scanning of Journals”.

Table 3 shows the analytical framework for the data collection process of finally in this study included empirical investigations.

It should be noted that the analysis are restricted to the main empirical study of each publication. This approach seems to be justified since we are interested in the models and methodologies used for measuring OP. However, it would be interesting to look more closely at the development of instruments used, but this beyond the scope of this paper.

We are now going to give a synoptic description of results. Detailed results of the analysis of in this study included empirical investigations are shown in the annexed Table 6.

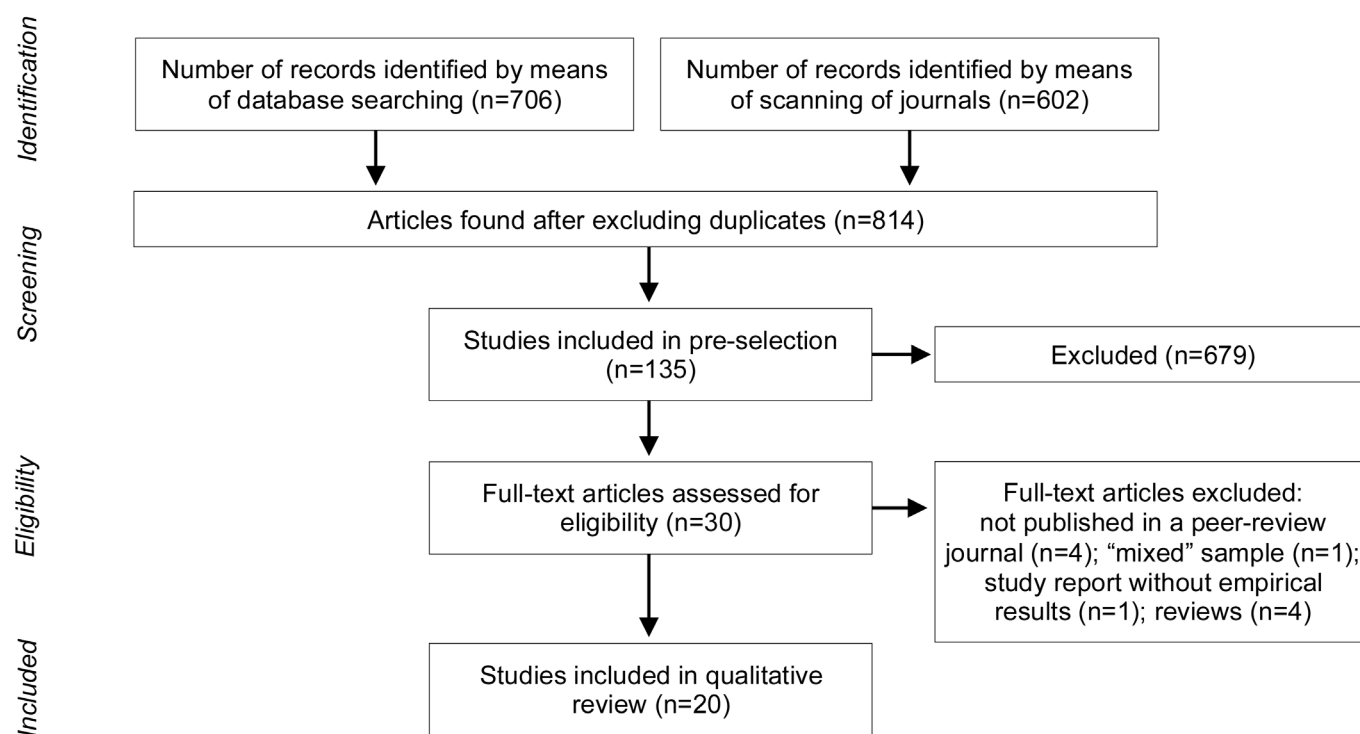


Figure 1: Flowchart of systematic literature research and article selection

Results

¹⁶ For databases and search phrases used, please see Appendix (Table 4).

¹⁷ For a list of Journals included, please see Appendix (Table 5).

Table 3: Description of analytical framework for the for the data collection process

Variable	Description
Year of publication	Year of publication.
Aim of study	Description of the main purpose(s) of the study.
OP and (no) further indicators/ determinants	Was there a measurement of indicators/determinants of OP, which were not indicators/ determinants of the OP construct(s) used?
Study design	Qualitative, quantitative, qualitative/quantitative
Sample (NSGBs - nation)	National affiliation of NSGBs.
Sample (NSGBs - sports categories)	Summer/winter; Olympic/non-Olympic
Sample (NSGBs - n)	Number of NSGBs.
Methods of data collection	Interview, survey, document analysis
Sample (persons)	If a primary data collection method was used who were the respondents?
Multiple constituencies (multiple constituencies within the sample; external rating)	If a primary data collection method was used, did the sample consists only of people belonging to the NSGBs (internal only) or were other (at least one group of) constituencies part of the sample (multiple)? If secondary data were used, was the rating done by a constituency? Decision criterion (yes/no): at least the additional perception of one external group has to have been incorporated.
Individual vs. group measurement	If a primary data collection method was used was the perception of the respondents measured by only one person per interest group or by several people?
Levels considered in the measurement of OP	Extending Nagel and colleagues' (2015) multi-level framework, four levels are differentiated: macro (external environment), meso-NSGB (organizational level of NSGB), meso-member organizations (internal environment), microlevel (motives and perceptions of individual persons). Meso-member organizations is especially related to expectations of or working relations with affiliated clubs or regional federations, which means, that items relating to constituencies in general are not efficient (=macro).
Models (description by authors)	Which theoretical framework(s) for OP was/were used? Description by authors.
Models (classification according to "traditional" approaches)	Which theoretical framework(s) for OP was/were used? Classification according to "traditional" approaches.

The majority (75%) of investigations analyzed used a quantitative study design, in four cases a mixed approach was applied, and only one study was based on a qualitative study design. Analyzing the studies' samples we have to differentiate between two levels: first, the organizations being part of the study, second, if a primary data collection method was applied, the respondents taking part in the investigations.

Regarding the first level and the national affiliation of the organizations it can be said, that there were only two articles in which the sample of NSGBs is taken from more than two countries. Analyzing the samples of the remaining 18 investigations reveals that 50% of the samples' NSGBs belong to European countries. The samples comprise both, Olympic sports and non-Olympic sports NSGBs, whereby five studies examine only Olympic sports NSGB, and seven studies examine both Olympic

and non-Olympic sports NSGBs. In eight cases, it was not possible to verify the compilation in this respect. We also wanted to analyze the samples' NSGBs regarding the groups of sports (summer sports, winter sports, or both) they represent. Unfortunately the samples' description was often (in 60% of cases) not sufficient in this respect. Therefore, it can only be said, that 30% of studies analyzed NSGBs representing summer sports, 10% used NSGBs representing summer and winter sports.

Before considering the above mentioned second level we have to take a closer look to the methods of data collection used in the investigations. In 35% of the studies more than one method of data collection was used, whereas in three studies a combination of documentary analysis and survey was applied, in additional three investigations a documentary analysis was combined with interviews and in one study documentary analysis, survey and interview was used. Within the group of inves-

tigations applying only one method of data collection ($n=13$), a survey was the method of data collection most used (77% within this group, 50% of all studies). In two investigations interviews were conducted and in one study a documentary analysis was applied.

When dealing with the question of multiple constituency within measuring OP¹⁸, and in this context with the above mentioned second level of analyzing the studies' samples, we have to ask who was evaluating and not what was evaluated (Chelladurai & Haggerty, 1991). Five studies did not use any form of rating two measure OP. On behalf of a sparsely description of samples we could not determine in two cases whether an evaluation was done only by the rating of people belonging to the NSGBs (internal only) or the additional perception of at least one external group was incorporated. This means, that 13 studies remained to be analyzed in this context. Interestingly, in six of the 13 studies rating of OP was exclusively done by internal persons.

The question what to ask was analyzed considering two aspects. First, which levels were considered in the measurement of OP and second which theoretical models were used for the measurement of OP. Due to our theoretical considerations in respect to the unit of analysis above, suggesting a pronounced dependence to the environment, a need for legitimization towards the lower levels, and considerable discretionary powers and room for manoeuvre, we were especially interested in the question if expectations of or working relations with affiliated clubs or regional federations (meso-member organizations) were considered within the construct of OP used in the investigations analyzed. Linked to possible occurrences of motivational problems we further analyzed the studies whether motives and perceptions of individual persons concerning the micro level were considered.¹⁹

In four cases it could not be determined which levels were incorporated. Interestingly, only two studies considered what we called the meso-member organizations level. The same is true for the micro level, whereas one of these two studies incorporated both mentioned aspects.

Categorizing models used in the empirical investigations in accordance to the above presented main approaches²⁰, their distribution of application spreads as follows: goal attainment approach (21%), systems resource approach (21%), internal process approach (19%), strategic constituencies approach (30%) and CVA (9%).²¹ We were further interested in the question,

whether studies only deal with indicators of OP or with indicators and determinants (=predictors) of OP as well. Although it can be said that 30% of studies took, beside the used constructs of OP, further determinants into account our question of interest must remain unanswered because of the problem of confusion of determinants of OP with indicators of OP²² within several studies.²³

Discussion

Depending on the notion of what an organization is, the perspective of what characterizes a "successful" organization also seems to change. In accordance to their characterization and organization theory based considerations above, NSGBs are not (or not so much) to be described as rational closed systems, but (far more) as natural and open systems. Environmental influences, the requirement of legitimization of action, and the possible emergence of motivational problems were (i.a.) identified as central themes to consider in the scope of a measurement of OP in NSGBs.

The systematic literature research based analysis show that only a few empirical studies examining the measurement of OP in NSGBs exist.²⁴ It should be added here that as well as the studies analyzed, there is also the review by O'Boyle and Hassan (2014) on this topic.²⁵ Furthermore, it should be noted that there are a large number of publications that are not included in this review, due to their format (e.g., Daumann & Römmelt, 2013). In this context, the question also arises as to whether a review should be extended to include sports organizations, i.e., associations and federations. A critical point to note here, however, is that it is possible that pure membership serving NPOs and NPOs, of whom some of which at least have a public contract, even if indirect, would be analyzed together. Even by only including federations at national level in our review, the analysis of samples by the means of sport categories the NSGBs represent reveals that still a heterogeneous "type" of organization is considered. It is worth to mention that Olympic and

18 This means that we restricted our analysis to the way the construct of OP was measured, not how possible further determinants were captured (see above).

19 This refers to the question whether the NSGBs characteristics as natural and open system is sufficiently taken into account and not to measurement biases because of measuring variables on collective level with individual raters' opinion.

20 In the above mentioned previous publications the approaches were categorized in accordance to the frameworks' description by the authors only.

21 In most cases, several approaches were used.

22 Cameron points to this problem of confusion in 1986.

23 For example two different approaches to measure OP were used within one study, it could not be determined whether the authors used the manifest variables of one approach only as indicator for this construct or furthermore as determinants of the second approach to measure OP. However, even if one approach was used in some cases no clear differentiation of indicators and determinants was done (e.g., in the work of Eydi et al., 2013 due to the figures) for one country a formative measurement model was used for the other a reflective model was applied.)

24 This tendency is increased because some of the articles analyzed refer to identical samples for their analysis. In this respect findings should be interpreted with caution, as individual characteristics could take on greater significance.

25 Another three were mentioned in the flowchart, but these are not dealing with the OP in NSGBs, but in sports organizations in general (see introduction).

non-Olympic sport federations are generally not subsidized in the same way. This influences obviously their OP.²⁶

The great importance of organizations' environmental institutions and the need to consider the different perspectives of the stakeholders seem to be reflected in the approaches used in recent research studies. In consensus with the research carried out by O'Boyle and Hassan (2014), the strategic constituencies approach can be seen as the most commonly used approach. However, analysis showed, that when a subjective rating was done to measure OP and the description of the sample was precise enough to determine the composition of the sample, in nearly half of eligible studies (6 out of 13), rating of OP was exclusively done by internal persons. Probably the studies were distinguishing the internal groups and therefore their rating was considered as being done by different constituencies. However, the above stated high importance of relationships of NSGBs to their environment clearly demand for taking the rating of external constituencies into account.

Due to this high dependence and not at least with the aim to not only describe phenomena on collective level, but to better understand them, there seems to be a growing application of multi-level frameworks within the analysis of sport associations and federations, like NSGBs, under different thematic aspects. Such a multi-level approach was used by Nagel et al. (2015) when analyzing professionalization in sport federations. Based on the theoretical considerations we characterized NSGBs as organizations with not only show a pronounced dependence to the environment, but also a need for legitimization towards the lower levels, and considerable discretionary powers and room for manoeuvre for individuals within these organizations as well as their member organizations. This means that a model for measuring OP in NSGBs has not at least to consider the need for legitimization (institutional legitimacy) to its affiliated organizations as well as possible conflicts of interests.

Therefore, the multi-level approach developed by Nagel et al. (2015) was extended on basis of considerations by Nagel (2007), the latter also again developing a multi-level framework, but in this case explicitly considering the individual level. The results clearly showed that expectations towards work relation with affiliated clubs or regional federations are hardly taken into account within the approaches used for measuring the OP in NSGBs. Furthermore, hardly any study considered the individual level. Drawing back to our considerations and characterization of NSGBs as natural and open systems the obvious insufficient incorporation of variables at micro level within the construct of OP seems to be problematic. Concerning the second above mentioned problem, the occurrence of biased assessment of OP within one stakeholder group, the analyzes showed that in several cases group measurement of OP was applied which opens the possibility to use inter-rater reliability measures and therefore controlling at least partly for potential measurement biases in individual assessments of organizational characteristics. Nevertheless, explicitly consid-

ering the micro level would give the opportunity to consider more complex research questions, in which both individuals and organizations are units of interest.²⁷ Such a closer examination of multilevel data structures would (hopefully) result in a substantial improvement of our understanding of OP in NPOs (Willems et al., 2014).

Beside the above stated limitations of study in the context of whom to ask and what to ask the analysis of investigations revealed a problem which was pointed out by Cameron (1986) more than 30 years ago: the confusion of determinants (predictors) and indicators of effectiveness. Not only for correctly applying more complex statistical procedures like structural equation modeling, where it has to be determined if the measurement model for a latent variable is formative or reflective, but also in terms of assumed causal relations authors should clearly state if a variable is an indicator of OP or treated as a determinant.

Designed to take the inherent paradoxical nature of organizations into account, the CVA seems to be especially suitable for the analysis of the OP in NSGB. However, a critical aspect of this approach is that criteria at micro level are disregarded. Applying this (or any other approach), it seems to be important that the assessment of the variables should be carried out by both internal and external stakeholders when measuring the OP in NSGBs.

Another fundamental requirement for the further development of approaches is the explicit consideration of outcomes (in the context of NSGBs especially behavioral changes), and especially of impacts/public value accomplishment. The reason for this requirement is to be found in the justification of the receipt of subsidies.²⁸ Issues concerning limits, dangers and problems in introducing systems for measuring OP in NSGBs seem (unfortunately) to have been given little attention. However especially in organizations like NSGBs where the management of relational dependencies and conformity to institutional norms in order to achieve legitimacy seems to play an important role, the design and application of OP measurement (systems) must be carefully observed (see for conflicting expectations towards the social role of managers of Olympic Training Centres in Germany Emrich, 1996). It seems reasonable to being alerted that such managerial actions might be more introduced in terms of their symbolic importance rather than their operational values (see basically Pfeffer and Salancik, 2003).

Apart from the limitation concerning the articles' required format of publication, another limitation of this study which should be emphasized is the fact that the assessment of the studies (e.g., the categorization of approaches used) was carried out by only one person. Furthermore, no quality assess-

27 For instance the closer examination of factors and effects influencing the unique perception of OP of individual raters (Willems et al., 2014).

28 Based on the value-generation process Lee and Nowell (2015) give an interesting overview and with it differentiation of performance dimensions considered within the core perspective of performance measurement in NPOs.

26 We appreciate the advice of one of the article's reviewer.

ment of studies is included in this review. Therefore, this review clearly does not fulfill central requirements of a systematic review in is to be described as systematized review (for differentiation see Grant & Booth, 2009).

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Competing Interests

The authors have declared that no competing interests exist.

Data Availability Statement

All relevant data are within the paper.

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Appendix

Table 4: Used databases and search phrases

Databases	Search phrases
SPOLIT (BISp databasis)	"Qualitätsmanagement", "quality management", "Stakeholder", "Organisation Effektivität", "Organisation Effizienz", "Organisation Performance"
EBSCOhost (all databases included)	"quality management AND sport", "quality AND sports clubs", "quality AND national sports organizations", "stakeholder AND sport", "sport AND organization AND effectiveness", "sport organization AND performance"
JSTOR	"quality management" AND sport, "national sport organizations", "sports clubs" AND quality, "stakeholder AND sport", "sport organization" AND effectiveness, "sport organization" AND performance"
ScienceDirect	"Qualitätsmanagement AND Sport", "quality management" AND sport clubs, "quality management" AND "national sport organization", "quality AND "national sport organization", "stakeholder AND national sport organization" + filter "sport", "sport AND organization AND effectiveness" + filter "sport", "sport AND organization AND performance" + filter "sport"
Springerlink	"Qualitätsmanagement AND Sport", "national sport organization", "quality management" AND sport clubs, "quality management" AND "national sport organization", "quality AND "national sport organization", "stakeholder AND Sportverein", "stakeholder AND "sport club", "stakeholder AND "national sport organization", "sport AND organization AND effectiveness", "sport organization" AND effectiveness, "sport AND organization AND performance", "sport organization" AND performance, "sport organization" AND performance" + filter "article"
Emerald Insight	"Qualitätsmanagement AND Sport", "quality management" AND sport clubs, "quality AND "national sport organization", "stakeholder AND "national sport organization", "stakeholder AND "sport clubs", "sport organization" AND effectiveness, "sport organization" AND performance"
Web of Science	"quality management AND sport", "quality AND "national sport organization", "stakeholder AND sport", "sport AND organization AND effectiveness", "sport AND organization AND performance", "sport organization" AND performance"
SAGE journals	"quality management AND sport", "stakeholder AND sport club", "stakeholder AND sport organization", "sport organization" AND effectiveness, "sport organization" AND performance",
Taylor & Francis Online	"Qualitätsmanagement AND Sport", "national sport organization", "quality management" AND sport clubs, "quality management" AND "national sport organization", "quality AND "national sport organization", "stakeholder AND "sport club", "stakeholder AND "national sport organization", "sport organization" AND effectiveness, "sport organization" AND performance"
WISO	"Sportverband Effektivität", "Sportverband Effizienz", "Sportverband Performance"

Table 5: Journals scanned within the literature search

European Sport Management Quarterly
Fachzeitschrift für Verbands- und Nonprofit-Management (Association Management and Non-Profit Management Magazine)
International Journal of Applied Quality Management
International Journal of Nonprofit & Voluntary Sector Marketing
International Journal of Sport Finance
International Journal of Sport Management and Marketing
International Journal of Sports Marketing and Sponsorship
Journal of Nonprofit Education and Leadership
Journal of Quality Management
Journal of Quantitative Analysis in Sports
Journal of Sport & Tourism
Journal of Sport Management
Journal of Sports Economics
Nonprofit and Voluntary Sector Quarterly
Nonprofit Management and Leadership
Quality & Quantity
Sciamus - Sport und Management
Sport in Society
Sport Management Review
Sport Marketing Quarterly
Sport & Society
Sport, Business and Management: An International Journal
Sportwissenschaft (Sport Science)
The Sport Journal
Total Quality Management & Business Excellence

Annex

Table 6: Description of empirical investigations of measuring OP in NSGBs

	Author(s)	Year of publication	Aim of study	OP and (no) further determinants	Study design	Sample (NSGBs - nation)	Sample (NSGBs - sports categories)	Sample (NSGBs - n)
1	Frisby	1986a	Examine the relationship between bureaucratic structure and OP.	OP and further determinants	Quantitative	Canada	Summer/winter Olympic	29
2	Frisby	1986a	Analyze the relationship between the goal attainment approach and systems resource approach of measuring OP.	OP and (no) further determinants	Quantitative	Canada	Summer/winter Olympic	29
3	Chelladurai, Szyzlo, & Haggerty	1987	Define and describe the dimensions of OP. Assess the relative importance attached to these dimensions by NSGBs administrators.	OP and (no) further determinants (measurement of importance only)	Quantitative	Canada	n.d. n.d.	48
4	Chelladurai & Haggerty	1991	Measurement of OP on the basis of the goal attainment approach, the internal process approach, and the strategic constituencies approach. Examine the relationship between these three approaches.	OP and (no) further determinants	Quantitative	Canada	n.d. Olympic/non-Olympic	51
5	Papadimitriou	1998	Explore institutional pressures and constraints exerted on the internal environment of NSGB. Examine to what extent these processes influence overall measures of OP in NSGBs.	OP and further determinants	Qualitative/quantitative	Greece	n.d. n.d.	20
6	Papadimitriou & Taylor	2000	Development of an inventory to measure OP. Explore possible differences in the ratings of OP by constituencies.	OP and (no) further determinants	Quantitative	Greece	n.d. n.d.	20
7	Bayle & Madella	2002	Measurement of OP in NSGBs and produce a typology of performance profiles.	OP and (no) further determinants	Quantitative	France	n.d. Olympic/non-Olympic	40
8	Karterioliotis & Papadimitriou	2004	Examine the factorial validity of the five-factor model of organizational effectiveness developed by Papadimitriou and Taylor (2000).	OP and (no) further determinants	Quantitative	Greece	n.d. n.d.	20
9	Madella et al.	2005	Identify and analyze the key success factors for OP in NSGBs.	OP and (no) further determinants	Quantitative	Portugal, Spain, Greece, Italy	Summer Olympic	4

10	Shilbury & Moore	2006	Develop a psychometrically sound set of scales within the construct of the CVA to measure organizational effectiveness in NSGBs.	OP and (no) further determinants	Quantitative	Australia	Summer Olympic/non-Olympic	10
11	Bayle & Robinson	2007	Explain OP in NSGBs by using a key configurational theory.	OP and further determinants	Qualitative/quantitative	France	Summer Olympic/non-Olympic	11
12	Papadimitriou	2007	Strategic constituencies approach based identification of a coherent set of OP measures.	OP and (no) further determinants	Quantitative	Greece	n.d. n.d.	20
13	Winand et al.	2010	Development a model for the measurement of OP in NSGBs. Clustering of NSGBs according to their performance. Measurement of priorities that Chairs of NSGBs attach to each dimension of OP.	OP and (no) further determinants	Quantitative	Belgium (french speaking community)	n.d. (focus on) Olympic	(focus on) 27 (56) prioritization: 13
14	Koh-Tan	2011	Explore the different perceptions of OP among constituent groups of NSGBs.	OP and (no) further determinants	Qualitative	Singapore	n.d. n.d.	25
15	Winand, Rihoux, Qualizza, & Zintz	2011	Analyze the link between possible key determinants and OP.	OP and further determinants	Qualitative/quantitative	Belgium (french speaking community)	n.d. n.d.	18
16	Millar & Stevens	2012	Analyze the impact of human resource training on OP.	OP and further determinants	Quantitative	Canada	n.d. n.d.	5
17	Eydi	2013	Examine the factorial validity of the 8-factor model of OP developed by Shilbury and Moore (2006).	OP and (no) further determinants	Quantitative	Iran	Summer Olympic/non-Olympic	6
18	Eydi, Abbasi, & Ibrahim	2013	Comparison of OP of NSGBs in Iran and Iraq.	OP and (no) further determinants	Quantitative	Iran, Iraq	Summer Olympic/non-Olympic	10
19	Ibrahim, Hamatineghad, Ramezanineghad, & Eydi	2013	Development of a model to measure OP in Iraq NSGBs.	OP and (no) further determinants	Quantitative	Iraq	Summer Olympic	4
20	Winand, Rihoux, Robinson, & Zintz	2013	Measurement of OP and clustering of NSGBs. Analyze the link between possible key determinants and OP.	OP and further determinants	Qualitative/quantitative	Belgium (french speaking community)	n.d. Olympic/non-Olympic	49 (18 selected for determinants)

Note: n.d.: could not be determined

Table 6 (continued): Description of empirical investigations of measuring OP in NSGBs

Methods of data collection	Sample (persons)	Multiple constituencies (multiple constituencies within the sample; external rating)	Individual vs. group measurement	Levels considered in the measurement of OP	Models (description by authors)	Models (classification according to "traditional" approaches)
1 OP: documentary analysis bureaucratic structures: survey; interview to obtain missing data	OP: -- bureaucratic structures: survey; executive directors of NSGBs (n=22) interviews: executive directors of NSGBs or Sport Canada consultants (n=7)	OP: no rating; variables and calculation determined by the author bureaucratic structures: internal only	OP: -- bureaucratic structures: individual measurement	OP: macro, meso-NSGB bureaucratic structures: meso-NSGB	"goal model of effectiveness", "systems model of effectiveness" (p. 64)	Goal attainment approach, systems resource approach [1]
2 Documentary analysis	--	OP: no rating; variables and calculation determined by the author	--	Macro, meso-NSGB	"goal model", "systems model" (p. 96)	Goal attainment approach, systems resource approach [1]
3 Survey	Volunteer administrators (presidents, vice-presidents, committee chair-persons) of NSGBs (n=64), professional administrators (executive directors, technical directors, program coordinators, national team coaches) of NSGBs (n=86)	No	Group measurement	Macro, meso-NSGB, meso-member organizations, micro (only one item)	"The present study followed this systematic approach, and treats the three models of effectiveness as individual dimensions within a larger, system-based model of effectiveness" (p. 112).	Goal attainment approach, systems resource approach, internal process approach, strategic constituencies approach (solely internal constituencies [2]) [3]
4 Documentary analysis; survey	Survey: volunteer administrators of NSGBs (n=153), professional administrators of NSGBs (n=84)	Yes survey: internal only documentary analysis: rating by a central constituency	Group measurement	Macro, meso-NSGB, micro* *Although the authors locate job satisfaction to the output of the organization we characterized it as being micro	"Given the need to use multiple measures of effectiveness, this study included three different sets of measures of effectiveness" (p. 127).	Goal attainment approach, internal process approach, strategic constituencies approach

5	Interview	General managers of NSGB and "various influential members working with NSOs [national sport organizations] and the GSS [General Secretariat of Sports]" (p. 171)	Yes	n.d.	OP: macro, meso-NSGB institutional pressure: macro	"identify perceptions of organizational performance by various influential members" (p. 171) "institutionalisms [...] and resource-dependence theory" (p. 179)	systems resource approach, strategic constituencies approach*
*It remains unclear if the variables on performance were determined throughout the interviews and are as such expression of perceptions or determined by the article's author (which would mean we would have further to add two approaches: goal attainment und internal process). On behalf of the description of the theoretical foundation we follow the first possibility.							
6	Survey	Board members (n=82), paid administrative staff (n=95), national coaches (n=60), scientific consultants (n=14), international officials (n=43), national team athletes (n=129)	Yes	Group measurement	Macro, meso-NSGB	"multiple constituency model of organizational effectiveness" (p. 23)	Strategic constituencies approach [1]
7	Survey	NSO experts (usually the director of a NSO at the Youth and Sport Ministry (n=n.d.), Director of Olympic Preparation (n=n.d.))	Yes	Individual measurement	Macro, meso-NSGB (meso-member organizations could not be clearly determined)	"contractual" approach" (p. 7)	Strategic constituencies approach
8	Survey	Board members (n=82), paid administrative staff (n=95), national coaches (n=60), scientific consultants (n=14), international officials (n=43), national team athletes (n=129)* *According to the authors, the sample was restricted to n=300. The resulting sample was not further described.	Yes	Group measurement	Macro, meso-NSGB	"In the present study, confirmatory factor analysis was used to examine the appropriateness of Papadimitriou and Taylor's five-dimensional model (2000) for explaining a set of effectiveness measures relevant to Greek national sport organizations" (p. 366).	Strategic constituencies approach

9	Documentary analysis; interview; survey	Interview: n.d. (key actors: president, director of the federation, etc.) survey: n.d.	n.d.	n.d.	Macro, meso-NSGB	"a specific model with a systemic approach" (p. 207)	Goal attainment approach, systems resource approach, internal process approach, strategic constituencies approach
10	Survey	board members, paid employees, subcommittee members, players coaches, officials, state representatives, sponsors, government agencies (n=289)	Yes	Group measurement	Macro, meso-NSGB	"competing values approach" (p. 6)	CVA[1]
11	Documentary analysis; interview	"Approximately 100 interviews with employees, directors, elected volunteers and key stakeholders of the NSGBs [national governing bodies] were carried out" (p. 255)	n.d.	n.d.	OP: n.d. determinants: macro, meso-NSGB, meso-member organization	"The research presented in this paper attempts to use a key configurational theory (Lawrence & Lorsch, 1967) to explain organizational performance in NSGBs [national governing bodies]" (p. 253).	Goal attainment approach, systems resource approach, internal process approach, strategic constituencies approach
12	Survey	Board members (n=82), paid administrative staff (n=95), national coaches (n=60), scientific consultants (n=14), international officials (n=43), national team athletes (n=129)	Yes	Group measurement	Macro, meso-NSGB	"multiple constituency approach to effectiveness" (p. 574)	Strategic constituencies approach
13	OP: documentary analysis prioritization: survey	OP: -- prioritization: chairs of NSGBs (n=10), executive managers (paid staff) (n=3)	OP: no rating; validity of performance indicators was considered by two external experts prioritization: internal only	OP: -- prioritization: individual measurement	Macro, meso-NSGB, meso-member organizations (hardly)	"methodology is inspired by Madella et al. (2005)" (p. 287) "development of a specific measurement system combining the multidimensional concepts as set out in the existing research" (p. 287).	Goal attainment approach, systems resource approach, internal process approach, strategic constituencies approach

14	Interview	Athletes (n=14), board members (n=10), coaches (n=13), secretariat staff (from executive directors to sports development officers) (n=12)	No	Group measurement	n.d.	"to provide an insight into the different perceptions of effectiveness among the different groups of stakeholders" (p. 217)	Strategic constituencies approach
15	OP: documentary analysis determinants: interview	OP: -- volunteer staff of NSGBs (n=18), paid staff of NSGBs (n=18)	OP: no rating; validity of performance indicators was considered by two external experts determinants: internal only	OP: -- determinants: individual measurement	OP: meso-NSGB determinants: macro, meso-NSGB	"This method was inspired by Madella et al. (2005)" "QCA is a configurational comparative approach" (p. 238)	Goal attainment approach, systems resource approach, internal process approach, strategic constituencies approach
16	Survey	Executive staff and volunteers from NSGBs (n=22)	No	Group measurement	OP: n.d. (on behalf of the theoretical framework used: meso-NSGB determinants: n.d. (on behalf of the theoretical framework used: micro	"When assessing the organizational performance of NSOs prior to and following a training intervention program, the internal processes model provides an appropriate evaluation approach (Burke & Hutchins, 2008)" (p. 291).	Internal process approach
17	Survey	Board members (5%), national coaches (13%), players (26%), officials (12%), and employees (44%); n=258	No	Group measurement	Macro, meso-NSGB	"The competing value [sic!] approach (CVA) was used as theoretical framework for developing this scale" (p. 83)	CVA
18	Survey	constituents from Iran (n=362), from Iraq (n=184) (constituents: board of directors, professional employees, national referees, athletes, coaches)	No	Group measurement	Macro, meso-NSGB	"This study used the Competing Values Approach (CVA) for comparison of the organizational effectiveness model of sporting federations in Iran and Iraq" (p. 119)	CVA

19	survey	presidents, vice-presidents, secretaries, professional staff, athletes, coaches of adult national teams and referees; n=180	No	Group measurement	Macro, meso-NSGB	"In general, competing values approach was selected as theoretical framework for the present study due to its multi-dimensions and coverage of other approaches within itself" (p. 75).	CVA
20	OP: documentary analysis determinants: interview	OP: -- volunteer staff of NSGBs (n=18), paid staff of NSGBs (n=18)	OP: no rating; validity of performance indicators was considered by two external experts determinants: internal only	OP: -- determinants: individual measurement	OP: meso-NSGB determinants: macro, meso-NSGB	"A quantitative measure, adapted from Madella et al. (2005), was developed to identify highly performing RSGBs" (p. 246) "Qualitative Comparative Analysis (QCA) is a configurational comparative approach" (p. 745)	Goal attainment approach, systems resource approach, internal process approach, strategic constituencies approach

Note: n.d.: could not be determined

[1] In accordance with Bayle and Madella (2002).

[2] This conclusion addresses the question of "who to ask" and not "what to ask" (for reasons see Chelladurai & Haggerty, 1991).

[3] Divergent from Bayle & Madella (2002) and Winand et al. (2010).